09/676402

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January 16, 2007

VIA COURIER

United States Patent and Trademark Office
Customer Service Window
Office of Patent Publication
Attention: Certificates of Correction Branch
Randolph Building
401 Dulany Street
Alexandria, Virginia 22314
U.S.A.

Dear Commissioner for Patents:

RE: **U.S. Patent No. 7,085,592**
Inventor(s): **Douglas Allan Davies**
For: **Wireless Transmission Evaluation System and Method**
Docket No.: **123081-339675**

Please find attached the following documents for filing with respect to the above patent:

1. Transmittal Form (1 sheet);
3. Request for Certificate of Correction (19 pages); and,
4. Certificate of Correction (1 sheet).

The Commissioner is hereby authorized to charge all necessary fees and to credit Deposit Account No. 150633 in the name of McCarthy Tétrault LLP (Customer No. 27,155).

Please date stamp and return to us the enclosed "Return Receipt Postcard".
Thank you very much for your assistance in this matter.

Yours very truly,
McCarthy Tétrault LLP

Per: J. Conneely

Joseph Conneely
JC/tf
/Enclosure

PTO/SB/21 (09-06)
Approved for use through 03/31/2007. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission: 21

Application Number	09/676,402
Filing Date	SEPTEMBER 29, 2000
First Named Inventor	DOUGLAS ALLAN DAVIES
Art Unit	2683
Examiner Name	JAMES D. EWART
Attorney Docket Number	123081-339675

ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☐ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
  - ☐ Landscape Table on CD
- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☑ Other Enclosure(s) (please Identify below):
  REQUEST FOR CERTIFICATE OF CORRECTION

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	MCCARTHY TETRAULT LLP (CUST. NO. 27,155)		
Signature	J. Conneely		
Printed name	JOSEPH CONNEELY		
Date	JANUARY 16, 2007	Reg. No.	54,883

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature			
Typed or printed name		Date	

PTO/SB/44 (04-05)
Approved for use through 04/30/2007. OMB 0651-0033
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

(Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,085,592

APPLICATION NO.: 09/676,402

ISSUE DATE : AUGUST 1, 2006

INVENTOR(S) : DOUGLAS ALLAN DAVIES

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

1. Specification, column 3, line 67: Replace the word -- Of -- with the word -- If --.

2. Specification, column 4, line 42: Insert the word -- and -- before the word -- selecting --.

MAILING ADDRESS OF SENDER (Please do not use customer number below):

McCarthy Tetrault LLP, Box 48, Suite 4700, 66 Wellington Street West, Toronto, Ontario, Canada M5K 1E6
(File Number 123081-339613)

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Patent No.	:	7,085,592
Issued	:	August 1, 2006
Title	:	WIRELESS TRANSMISSION EVALUATION SYSTEM AND METHOD
Applicant	:	Douglas Allan Davies
Application No.	:	09/676,402
Filed	:	September 29, 2000
Confirmation No.	:	1935
Art Unit	:	2683
Examiner	:	James D. Ewart
Docket No.	:	123081-339675
Customer No.	:	27,155

Commissioner of Patents
Office of Patent Publication
Attention: Certificates of Correction Branch
P.O. Box 1450
Alexandria, V.A. 22313-1450

REQUEST FOR CERTIFICATE OF CORRECTION

Sir:

The Applicant respectfully requests the issue of a Certificate of Correction for the above noted patent.

The errors for which corrections are requested were made by the Patent Office.

The requested corrections are as follows:

1. Specification, column 3, line 67: Replace the word -- Of -- with the word -- If --.
2. Specification, column 4, line 42: Insert the word -- and -- before the word -- selecting --.

Please find enclosed a completed Form PTO/SB/44 ("Certificate of Correction") indicating the above corrections.

The above corrections are fully supported by Applicant's "Amendment After Allowance Under 37 CFR §1.312" of October 20, 2005, a copy of which is enclosed for reference. In particular, with respect to error 1, please see the first paragraph on page 13. And, with respect to error 2, please see the second paragraph on page 14.

If necessary, the Commissioner is hereby authorized to charge all necessary fees and to credit Deposit Account No. 150633 in the name of McCarthy Tétrault LLP (Customer No. 27,155).

No new matter has been entered by the above corrections.

Respectfully submitted,

McCarthy Tétrault LLP

Date: January 16, 2007 By

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Enclosures

IN THE UNITED STATE PATENT AND TRADEMARK OFFICE

In re Application of:	**DAVIES, Douglas Allan**
Serial No.:	**09/676,402**
Filed:	**September 29, 2000**
Title:	**WIRELESS TRANSMISSION EVALUATION SYSTEM AND METHOD**
Examiner:	**EWART, James D.**
Art Unit:	**2683**
Confirmation Number:	**1935**
Atty's Docket No.:	**123081-339675 (T01215-0060 US)**

United States Patents and Trademarks Office
Customer Service Window, **Mail Stop ISSUE FEE**
Randolph Building, 401 Dulany Street
Alexandria, Virginia 22314

AMENDMENT AFTER ALLOWANCE UNDER 37 CFR §1.312

Dear Commissioner:

In response to the Notice of Allowance dated September 16, 2005, kindly note that by way of a transmittal of October 19, 2005 to Mail Stop Issue Fee we are providing a confirmation that the issue fee has already been submitted to the Office.

Please also note that an amendment After Allowance was previously submitted concurrently with the issue fee of $1,400 on March 3, 2005 in response to a previous Notice of Allowance dated December 7, 2004. On August 1, 2005, Applicant subsequently petitioned for withdraw of the application from issue and submitted a request for continued examination. In response to the request for continued examination, the Office issued a further Notice of Allowance dated September 16, 2005. In the Notice of September 16, 2005, it was not made clear that the amendment after allowance of March 3, 2005 was considered. Applicant therefore resubmits the same amendments herein for the consideration of the Examiner.

Pursuant to 37 CFR §1.312, kindly amend the subject application as follows, in view of the comments set out here below:

Amendments to the Claims are reflected in the listings of claims which begins on page 3 of this paper.

Amendments to the Specification begin on page 10 of this paper.

Amendments to the Drawings begin on page 15 of this paper and include both attached replacement sheets and an annotated sheets showing changes.

Remarks begin on page 16 of this paper.

An **Appendix** including annotated drawing figures is attached following page 17 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. – 17 (Cancelled)

18. (Currently Amended) A method of evaluating a tentative location for a fixed subscriber communication site of a wireless communication system using a wireless testing system, said wireless testing system comprising a testing antenna for communicating wireless communication signals with a transmit antenna and a receive antenna at a base station, an adjustable mount associated with said testing antenna for orienting said testing antenna in a plurality of pan orientations and a plurality of tilt orientations, an adjustable boom attached to said adjustable mount for positioning said testing antenna at a plurality of heights, a signal measuring device associated with said testing antenna and a signal attenuator associated with said testing antenna, said method comprising:

at said tentative location

a) positioning said testing antenna such that an angle α defined by said testing antenna as a vertex between said transmit and receive antennae is 1.5 degrees or less;

b) adjusting tilt, pan, and height of said testing antenna to exchange wireless communication signals with said transmit and receive antennae; ~~and~~

c) measuring a characteristic of said wireless communication signals received by said testing antenna by integrating a power signal of said wireless communication signals across a frequency band associated with said wireless communication signals;

d) attenuating said wireless communication signals until said testing antenna no longer receives said wireless communication signals from said transmit antenna;

e) calculating ambient atmospheric and meteorological conditions corresponding to said amount of attenuation based on a distance between said testing antenna and said base station; and

f) comparing said calculations of said ambient atmospheric and meteorological conditions to a predetermined threshold level required to maintain a level of service required for communications with said base station when said ambient atmospheric and meteorological conditions exist,

wherein, if said level of attenuation exceeds said threshold level, said tentative location for said fixed subscriber communication site is acceptable.

19. - 25. (Cancelled)

26. (Previously Presented) A method of establishing an optimal location for a fixed subscriber communication site for a base station having a transmit antenna and a receive antenna, comprising:

at a tentative location for said fixed subscriber communication site

a) positioning a testing antenna such that an angle α defined by said testing antenna as a vertex between said transmit and said receive antennae is 1.5 degrees or less;

b) adjusting tilt, pan, and height of said testing antenna to exchange wireless communication signals with said transmit and said receive antennae; and

c) measuring a characteristic of said wireless communication signals with said communication unit.

27. (Currently Amended) The method of establishing an optimal location for a fixed subscriber communication site, as claimed in claim 26 wherein

said testing antenna, receive antenna and transmit antenna are located relative to each other to form a right angle triangle;

tan α is less than or equal to a ratio comprising

a numerator comprising a distance from said receive antenna to said transmit antenna; and

a denominator comprising a distance from said testing antenna to one of said receive antenna and said transmit antenna.

28. (Previously Presented) The method as claimed in claim 27, wherein said characteristic is power of said wireless communication signals integrated over a frequency band associated with said wireless communication signals.

29. (Previously Presented) The method as claimed in claim 28, further comprising

attenuating said wireless communication signals until said testing antenna receives practically none of said wireless communication signals transmitted by said base station;

calculating ambient atmospheric and meteorological conditions corresponding to said amount of attenuation based on a distance between said testing antenna and said base station; and

comparing said ambient atmospheric and meteorological conditions to a predetermined threshold level required to maintain a level of service required for said testing antenna to communicate with said base station when said ambient atmospheric and meteorological conditions are present between said base station and said testing antenna.

30. (Currently Amended) The method as claimed in claim 26, further comprising

repeating steps a), b) and c) at a second location;

comparing characteristics measured at said tentative location and said second location; and

selecting one of said tentative location and said second location as said optimal location based on said step of comparing characteristics.

31. (Previously Presented) The method as claimed in claim 26, further comprising variably attenuating said wireless communication signals before evaluating said

characteristics of said wireless communication signals to simulate ambient atmospheric and meteorological conditions around said wireless testing system.

32. (New) A method of establishing an optimal location for a fixed subscriber communication site for a base station having a transmit antenna and a receive antenna, comprising:

at a tentative location for said fixed subscriber communication site

a) positioning a testing antenna such that an angle α defined by said testing antenna as a vertex between said transmit and said receive antennae is small enough to ensure that transmissions received at the base station from both said transmit antenna and said receive antenna are within half power points of an antenna pattern at said base station;

b) adjusting tilt, pan, and height of said testing antenna to exchange wireless communication signals with said transmit and said receive antennae; and

c) measuring a characteristic of said wireless communication signals with said communication unit.

33. (New) A method of evaluating a tentative location for a fixed subscriber communication site of a wireless communication system using a wireless testing system, said wireless testing system comprising a testing antenna for communicating wireless communication signals with a transmit antenna and a receive antenna at a base station, an adjustable mount associated with said testing antenna for orienting said testing antenna in

a plurality of pan orientations and a plurality of tilt orientations, an adjustable boom attached to said adjustable mount for positioning said testing antenna at a plurality of heights, a signal measuring device associated with said testing antenna and a signal attenuator associated with said testing antenna, said method comprising:

at said tentative location

a) positioning a testing antenna such that an angle α defined by said testing antenna as a vertex between said transmit and said receive antennae is small enough to ensure that transmissions received at the base station from both said transmit antenna and said receive antenna are within half power points of an antenna pattern at said base station;

b) adjusting tilt, pan, and height of said testing antenna to exchange wireless communication signals with said transmit and receive antennae;

c) measuring a characteristic of said wireless communication signals received by said testing antenna by integrating a power signal of said wireless communication signals across a frequency band associated with said wireless communication signals;

d) attenuating said wireless communication signals until said testing antenna no longer receives said wireless communication signals from said transmit antenna;

e) calculating ambient atmospheric and meteorological conditions corresponding to said amount of attenuation based on a distance between said testing antenna and said base station; and

f) comparing said calculations of said ambient atmospheric and meteorological conditions to a predetermined threshold level required to maintain a level of service required for communications with said base station when said ambient atmospheric and meteorological conditions exist,

wherein, if said level of attenuation exceeds said threshold level, said tentative location for said fixed subscriber communication site is acceptable.

Amendments to the Specification:

Please replace the paragraph starting at page 8, line 11 with the following amended paragraph:

Referring to Fig. 1a, each subscriber station 102 comprises antenna 110 and communication station 112. When base station 100 (not shown in Fig. 1a) transmits wireless communication signals to a subscriber station 102, antenna 110 receives wireless communication signals and transmits them through a connection to communication station 112. When communication station 112 transmits the message through a connection to antenna 110 which in turn converts the message to a wireless communication signal which is transmitted to base station 100.

Please replace the paragraph starting at page 10, line 6 with the following amended paragraph:

Referring to Figs. 4a-4b, antenna 202 may be attached to mount 204 with bracket 400. Bracket 400 allows antenna 202 to be rotated about mount 204, thereby changing the relative polarity of transmission sent from antenna 202 to base station antenna 106. It will be appreciated that the rotation of antenna 202 about mount 204 still maintains antenna 202 at a set plane relative to ~~said~~ the base station 100, which is determined by the pan and tilt orientation of mount 204. In Fig. 4a, antenna 202 is oriented in a fully upright manner as indicated by arrow 402. In Fig. 4b, antenna 202 is oriented in a manner 90° from the orientation shown in Fig. 4a per arrow 404. Accrodingly, transmission s from antenna 202 using the orientation of Fig. 4b are polarized with transmissions from antenna 02 having an orientation as shown in Fig. 4a.

Please replace the paragraph starting at page 10, line 15 with the following amended paragraph:

Referring to Fig. 5, signals received by antenna 202 are transmitted to communication unit 208. Communication unit 208 has directional coupler 502, Network Interface Unit 504 and spectrum analyzer 506. Directional coupler 502 splits the signals

received to provide one signal tap to Network Interface Unit (NIU) 504 and another signal tap to spectrum analyzer 506. It can be appreciated that while directional coupler 502 may degrade signals received, the quality of the degradation of the signals received is known. Accordingly, measurements of signals received may be adjusted to account for signal degradations produced by directional coupler 502.

Please replace the paragraph starting at page 10, line 22 with the following amended paragraph:

Essentially, NIU 504 is a radio modem having multiple interfaces to process different communication protocols. In processing wireless communication signals, NIU 504 receives signals from base station 100 and demodulates the received signals to T1, ethernet or OC3 traffic streams. NIU 504 also generates messages for transmitting to base station 100 by receiving T1, ethernet, or OC3 traffic and modulating the transmitted signals such that it may be transmitted wirelessly over a radio link several kilometres long. In the embodiment, NIU 504 may be modem model 28110 (providing T! with Ethernet communications), model 28130 (providing quad T1 with ethernet communications), all available from Alcatel ~~Networks Corporation~~ Canada Inc. of Kanata, Ontario, Canada. The generated messages are transmitted through connections to directional coupler 502 then to antenna 202. Antenna 202 converts the generated message to a wireless signal and transmits the wireless signal to base station 100. It can be appreciated that a bi-directional connection may be used between antenna 202 and directional coupler 502 and between NIU 504 and directional coupler 502 to transmit generated signals received from and transmitted to base station 100.

Please replace the paragraph starting at page 13, line 7 with the following amended paragraph:

Referring to Fig. 5, testing system 200 may also evaluate upstream wireless communication signals. When wireless testing system 200 transmits wireless communication signals to base station 100, base station 100 may instruct NIU 504 via signals encoded in downstream wireless transmissions to communication station ~~120~~ 112

to decrease the power of the wireless communication signals transmitted to conform to ideal power characteristics of wireless communication signals received by base station 100. This instruction is transmitted from base station 100 to NIU 504 through antenna 202.

Please add the following paragraphs at page 5, line 16 before the heading "BRIEF DESCRIPTION OF THE DRAWINGS":

In another broad aspect, a method of evaluating a tentative location for a fixed subscriber communication site of a wireless communication system using a wireless testing system is provided. The wireless testing system comprises a testing antenna for communicating wireless communication signals with a transmit antenna and a receive antenna at a base station, an adjustable mount associated with the testing antenna for orienting the testing antenna in a plurality of pan orientations and a plurality of tilt orientations, an adjustable boom attached to the adjustable mount for positioning the testing antenna at a plurality of heights, a signal measuring device associated with the testing antenna and a signal attenuator associated with the testing antenna. The method comprises, at the tentative location: a) positioning the testing antenna such that an angle α defined by the testing antenna as a vertex between the transmit and receive antennae is 1.5 degrees or less; b) adjusting tilt, pan, and height of the testing antenna to exchange wireless communication signals with the transmit and receive antennae; c) measuring a characteristic of the wireless communication signals received by the testing antenna by integrating a power signal of the wireless communication signals across a frequency band associated with the wireless communication signals; d) attenuating the wireless communication signals until the testing antenna no longer receives the wireless communication signals from the transmit antenna; e) calculating ambient atmospheric

and meteorological conditions corresponding to the amount of attenuation based on a distance between the testing antenna and the base station; and f) comparing the calculations of the ambient atmospheric and meteorological conditions to a predetermined threshold level required to maintain a level of service required for communications with the base station when the ambient atmospheric and meteorological conditions exist. If the level of attenuation exceeds the threshold level, the tentative location for the fixed subscriber communication site is acceptable.

In yet another broad aspect, a method of establishing an optimal location for a fixed subscriber communication site for a base station having a transmit antenna and a receive antenna is provided. The method comprises, at a tentative location for the fixed subscriber communication site: a) positioning a testing antenna such that an angle α defined by the testing antenna as a vertex between the transmit and the receive antennae is 1.5 degrees or less; b) adjusting tilt, pan, and height of the testing antenna to exchange wireless communication signals with the transmit and the receive antennae; and c) measuring a characteristic of the wireless communication signals with the communication unit.

The testing antenna, receive antenna and transmit antenna may be located relative to each other to form a right angle triangle, and tan α may be less than or equal to a ratio comprising: a numerator comprising a distance from the receive antenna to the transmit antenna; and a denominator comprising a distance from the testing antenna to one of the receive antenna and the transmit antenna.

The characteristic may be power of the wireless communication signals integrated over a frequency band associated with the wireless communication signals.

The method may further comprise: attenuating the wireless communication signals until the testing antenna receives practically none of the wireless communication signals transmitted by the base station; calculating ambient atmospheric and meteorological conditions corresponding to the amount of attenuation based on a distance between the testing antenna and the base station; and comparing the ambient atmospheric and meteorological conditions to a predetermined threshold level required to maintain a level of service required for the testing antenna to communicate with the base station when the ambient atmospheric and meteorological conditions are present between the base station and the testing antenna.

The method may further comprise: repeating steps a), b) and c) at a second location; comparing characteristics measured at the tentative location and the second location; and selecting one of the tentative location and the second location as the optimal location based on the step of comparing characteristics.

The method may further comprise variably attenuating the wireless communication signals before evaluating the characteristics of the wireless communication signals to simulate ambient atmospheric and meteorological conditions around the wireless testing system.

Amendments to the Drawings:

The attached one (1) sheet of drawings include a change to Figure 4b. The sheet, which includes Figure 3 and Figures 4a to 4b, replaces the original sheet including Figure 3 and Figures 4a to 4b.

In Figure 4b, reference numeral "402" has been replaced with -- 404 --.

Attachment: Replacement Sheet including Figure 3 and Figures 4a to 4b.
Annotated Sheet showing change

REMARKS

In the claims, Applicant amends claims 1, 27 and 30 to provide grammatical corrections.

New independent method claims 32 and 33 are to define functional parameters for the placement of the receive and transmit antennae based on the half power points of the antenna pattern at the base station. Support for the claims is found in the specification as filed at page 14, lines 15 to 22. It is submitted that claims 32 and 33 are compatible with allowable subject matter identified by Examiner. In view of extra claim fees submitted for previous claims (now cancelled), Applicant believes that no further extra claim fees are payable for claims 32 and 33. However, if any such extra claim fees (or any other fees) are payable, Applicant authorizes Commissioner to charge Agent's deposit account for such fees.

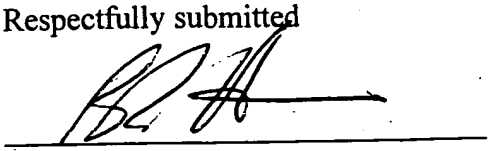
In the specification, Applicant amends the language of the Summary of Invention section to track the claims as amended. Applicant further amends the specification to correct clerical and typographical errors.

In the drawings, Figure 4b is amended to provide reference numerals that are consistent with reference numerals used in the specification.

No new matter has been added by way of the present Amendment.

Applicant respectfully requests that the foregoing amendments be incorporated in the application. The Examiner is invited to contact the undersigned attorney by telephone to discuss this case further, if necessary.

Respectfully submitted



October 19, 2005
Date

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